

WHAT IS CLAIMED IS:

1. A screw compressor comprising a casing accommodating therein at least a pair of male and female rotors meshing with each other and bearings, a discharge casing including bearings that support the male and female rotors, a substantially cylindrical-shaped, vertical oil separator, and an oil reservoir that accumulates therein an oil separated by the oil separator, and wherein the oil separator and the oil reservoir are formed integral with the casing.
2. A screw compressor according to claim 1, wherein an inner space in the oil separator and the oil reservoir are communicated to each other by at least one or more openings.
3. A screw compressor according to claim 2, wherein the opening or openings are provided at a lower end of the oil separator or in the vicinity of the lower end.
4. A screw compressor according to claim 3, wherein the opening or openings are formed so that a width thereof is increased toward an outer peripheral side of the inner space of the oil separator from a center thereof.
5. A screw compressor according to claim 1, wherein a safety valve communicated with a discharge gas passage of the compressor is mounted on an outer wall of the oil separator and a line connecting between the safety valve and a center of the oil separator is

made substantially in parallel to axes of the screw rotors.

6. A screw compressor comprising a main casing accommodating therein a pair of male and female rotors meshing with each other, bearings and the like, a discharge casing including bearings that support the rotors, an oil separator, and an oil reservoir that accumulates therein an oil separated by the oil separator, and wherein the oil separator and the oil reservoir are formed integral with the main casing, an inner space in the oil separator and the oil reservoir are communicated with each other by at least one or more openings, a safety valve is mounted on the oil separator, and a line connecting between the safety valve and a center of the oil separator is made substantially in parallel to axes of the screw rotors.

7. A screw compressor according to claim 2, wherein the opening or openings define a part of a lower portion of an oil separation space of the oil separator and are formed toward an outer peripheral side of the inner space of the oil separator from a center thereof.